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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/769,421	01/26/2001	Eung Tae Kim	CIT/K-136	4233

7590 09/22/2004

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CHANTILLY, VA 20151

EXAMINER

SENGI, BEHROOZ M

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/769,421

**Applicant(s)**

KIM, EUNG TAE

**Examiner**

Behrooz Senfi

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's arguments (paper no. 6, filed 4/21/2004) with respect to claims 1, 4, 14 and 17 have been considered but are moot in view of the new ground(s) of rejection.

Applicant amends (paper no. 6, filed 4/21/2004) claims 1 – 4, 6 – 7, 11 – 12, 14, 17, 19, 22 – 23 and added new claims 24 – 35.

### *Claim Rejections - 35 USC § 102*

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 - 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Fimoff (US 6,665,344).

Regarding claims 1 and 24, Fimoff '344 discloses "an apparatus for receiving Digital Motion Pictures" (i.e. fig. 1), comprising: "a video bit stream extracting means for separating and extracting an interlaced scanning sequence video bit stream from a signal" (i.e. fig. 10), and "a video display processor for carrying out down conversion by converting the extracted video bit stream to a field DCT coded block if the extracted video bit stream corresponds to a frame DCT coded block ..... " (i.e. fig. 10, module 102 and 110, abstract, col. 1, lines 5 – 10).

Regarding claims 4 and 17, Fimoff '344 discloses, "a video decoding device in which input video bit streams are restored into pixel values of an original screen by inverse quantization IQ after variable length decoding VLD, inverse discrete cosine

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conversion IDCT, and motion compensation MC" (i.e. fig. 2, decoder 32, IQ 36, IDCT 38 and MC 34), and "a down-sampling IDCT part for carrying out 4x4 inverse discrete cosine transform IDCT after DCT coefficients of high frequency components in horizontal/vertical directions ....." (i.e. fig. 3, 56, fig. 17, 304, 312 and figs. 4 – 6), and "a memory for storing ....." (i.e. fig. 2, memory 42), and "an up-sampling part for carrying out up-sampling of a reference picture ....." (i.e. fig. 3, up sampler 64), and "a motion compensation part ....." (i.e. fig. 3, MC 62) and "a down-sampling part ....." (i.e. fig. 3, down sampler 66), and "a video display processor for reading the data stored in the memory according to a display mode" (i.e. cols. 8 - 9, lines 63 - 5).

Regarding claims 2 – 3, the limitations claimed are substantially similar to claim 4, therefore the grounds for rejecting claim 4 also apply here.

Regarding claims 5, 18 and 25, Fimoff '344 discloses "a video decoding device, wherein the IDCT part comprises: a horizontal reduction part for removing the DCT coefficients of the high frequency components ....." (i.e. figs. 9 and 17), and "frame/field converter for converting the frame DCT coded block ....." (i.e. fig. 10, 102) "a matrix multiplier for down sampling the field DCT ....." and a horizontal IDCT for carrying out IDCT in horizontal direction" (i.e. fig. 17, col. 11, lines 35+ and col. 17, lines 52 – 55).

Regarding claims 6 – 7 and 19, the mathematical equation listed in claims 6 – 7 and 19, reads on (i.e. cols. 12 - 14, equations 2, 3, 5, 6, 10 and 16).

Regarding claim 8, the limitation "8 x 16 matrix" reads on (i.e. col. 16, lines 63).

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Regarding claim 9, 10 and 20 - 21, the limitations "up sampling part selects fields proper for the motion vectors, ....." (i.e. fig. 15), and "half-pel interpolation with relation to the up-sampled blocks ..... in claim 10" (i.e. fig. 15, 206).

Regarding claims 11 - 13, and 22 - 23, Fimoff '344 discloses, "a video decoding Device wherein the down-sampling part converts eight pixels into four pixels ..... and "up-sampling ..... in claim 12" (i.e. fig. 15, 206, col. 16, lines 35+) and "post-processing filter in claim 13" reads on (i.e. fig. 10, 108 and 110).

Regarding claims 14 and 30, Fimoff '344 discloses "an apparatus for receiving Digital Motion Pictures" (i.e. fig. 1), comprising: "a video bit stream extracting means for separating and extracting an interlaced scanning sequence video bit stream from a signal" (i.e. fig. 10), and "carrying out down-conversion of a frame DCT coded block and a field DCT coded block to a picture of a pixel structure based on only a top field (which is the same as of only one field)" reads on (col. 6, lines 6 - 18, wherein the DCT domain down-sampling performed by a down conversion decoder separately on each field block) and "if the extracted video bit stream is an interlaced sequence" interlace is a field.

Regarding claims 15 and 31, Fimoff '344 discloses, "variable length decoding" (i.e. fig. 2) and "inverse quantization" (fig. 2, 36) and "removing the DCT coefficients" (i.e. fig. 17, 304 and 312) and "8 x 4 inverse discrete cosine transform" (i.e. col. 16, 44+).

Regarding claims 16, 26 and 32, the limitations claimed are substantially similar to claim 3, therefore the grounds for rejecting claim 3 also applies here.

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Regarding claims 27 – 29 and 33 – 35, the limitations claimed are substantially similar to claims 4 and 17, therefore the grounds for rejecting claims 4 and 17 also applies here.

***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is **(703)305-0132**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (703)305-4856.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Or faxed to:**


**(703) 872-9314**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

B. S. B. S.

9/20/2004

  
CHRIS KELLEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER